

UNITED STATES PATENT OFFICE.

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RAILROAD-CAR.

SPECIFICATION forming part of Letters Patent No. 373,098, dated November 15, 1887.

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To all whom it may concern:

Be it known that I, HENRY HOWARD SESSIONS, a citizen of the United States, residing at the village of Pullman, in the county of Cook and State of Illinois, have invented a new and useful Improvement in the Construction of Railroad-Cars; and I do hereby declare that the following specification, taken in connection with the drawings made a part of the same, is a full, clear, and exact description thereof.

The invention hereinafter particularly described is embodied in the application to the individual cars, which when coupled will compose a train, of a frame-shaped plate arranged in a vertical plane parallel with a vertical transverse plane passing through the car-body and projecting, by means of backing-springs, for a short distance beyond the end of the car. The height of said frame-plate for the best results should be substantially that of the height of the car to which it is attached, and the same should be so shaped as to allow a free communication between the ends of adjacent cars for the passage of persons through such frame-plates.

The purpose of the improvement is twofold—first, to diminish the racking effect upon a car-body, due to its momentum when it is suddenly brought from a state of motion to a state of rest from any cause, as well as the same injurious consequences when a car is suddenly started from a state of rest, and, secondly, to diminish the tendency to a swaying or oscillating movement which is developed whenever a train is running at high speed upon an ordinary railroad-track.

I have illustrated my improvement in the drawings by exhibiting the same in connection with another improvement in car construction, which consists of a vestibule attachment to the ends of railroad-cars for the purpose of completely inclosing the sides of the car-platform and allowing of a continuous inclosed aisle or passage-way between the adjacent ends of the coupled cars of a train. This vestibule feature is no part of the present invention.

My improvement can be usefully applied to cars constructed with such vestibules or to cars of ordinary construction having uninclosed platforms.

Figure 1 shows in perspective the ends of two cars coupled together with my improvement added. Fig. 2 shows in perspective portions of the side and end elevations of a single car. Fig. 3 is a plan of the platforms and portions of two cars coupled together, one portion showing a horizontal section through the vestibule and a part of the platform removed, and a part in a more elevated plane, showing the roof of the car with a portion of the hood removed. Fig. 4 is an isometric perspective drawing with a portion of the roof and end of car removed. Fig. 5 is a front elevation of the upper part of the vestibule of a car with a portion of the roof removed. Fig. 6 is a vertical longitudinal section of the upper part of a car provided with a vestibule.

So much of the drawings as represent the arrangement and construction of a vestibule attachment are not illustrative of any invention set forth in this patent, except as the same show in combination therewith the improvement hereinafter specifically described.

In the drawings, *a* indicates a frame-shaped plate of iron, of about six inches in width and about five-eighths of an inch in thickness. It is best shown in front view at Fig. 2 and in perspective at Fig. 4. The said dimensions are not material, provided the area of the face surface of the frame-plate is sufficient to furnish, when in contact under pressure with the frame-plate of an adjacent car in train, the needed degree of frictional resistance to the impulses which, in the running of a train, generate the disposition in the cars to oscillate laterally, as hereinafter more fully set forth, and provided, also, that the thickness of the frame-plate be sufficient to furnish the necessary strength to meet the conditions which exist when cars are being coupled into a train or when the cars are subjected to the shocks incident to sudden stoppages and startings of the train. It is far preferable that the frame-plate *a* should be made of either cast or wrought iron or steel; but other material—as, for example, oak or other hard woods—may be substituted therefor.

The height of the frame-plate *a* should, for the best results, be something over six feet in height, or as high as the wooden plate-girders of the frame of the car-body, and sufficient